

surrounding the house where a case existed than there would be in a remote and more prosperous section of the city. While there is a tendency for pellagra to occur in that part of a community having primitive systems of disposal rather than in the part having proper sewage systems, this proves nothing, for the poorer sections which have the less developed systems, are the sections where poverty and, consequently, a poorer dietary exist. The commission has shown a tendency to believe that, because they have not found any special food to be the causation factor, the disease could not be of dietary origin, and that if it were a deficiency disease, fresh meat, milk and eggs might be supposed to supply this deficiency. They have collected evidence to show that of the 82 persons in families using fresh meat daily, 4.88 per cent. were pellagrins. This evidence is not considered conclusive because (1) it does not consider in sufficient detail the quantities of the various foods used; (2) it considers individual food-stuffs and their influence rather than the total diet; (3) the possibility that wheat-flour is mainly responsible for the deficiency has not been investigated sufficiently; (4) in an investigation of the diet of pellagrins it was found that among both the poorer and the well-to-do cases, there were some circumstances as a result of which the patient had lived on a very one-sided diet, in every case consisting chiefly of flour, corn products, or potatoes, with the addition of salt meat or canned vegetables; (5) pellagra is becoming more common in the south every year and an attempt has been made to explain this in accordance with the hypothesis that it is due to a dietary deficiency. The following facts indicate that changes have occurred in the dietary of the population as a whole during the last ten years: (1) The population itself has increased greatly, especially the industrial population among which the dietary is distinctly inferior to that of the remainder of the population. (2) There has been a great change in the purchasing power of the population, but there has also been a greater increase in the price of food so that there is a distinct tendency for poorer people to cut down the consumption of fresh meat, eggs, vegetables, and fruit and to increase the consumption of such staples as cornmeal, hominy, and flour. (3) Such tendencies were actually demonstrated in a number of cases investigated and statistics were collected which showed that the per capita consumption of fresh meat and of pure lard had decreased very considerably in the last ten years while the consumption of canned goods, cornmeal, and flour had increased. As a result of the investigations the conclusion is reached that the hypothesis that pellagra is caused by a dietary deficiency seems very plausible, and must be considered in subsequent studies of the disease.

---

**How Tuberculosis is Contracted.**—SMITH (*Jour. Med. Research*, 1915, xxxii, 417) states that the beginning of the tuberculous changes in the wall of the minute bronchi is not in itself proof that the bacilli are air-borne, nor does it prove that inhaled bacilli have penetrated directly the mucosa of the minute bronchia. The development of tuberculosis in the apical lobes in man is best accounted for by the less active aëration and less active lymph current. Rib pressure may contribute toward fixing the bacilli. Bacilli, deposited either from the

air or the blood in other lobes are either destroyed or promptly carried by the lymph current to the lymph nodes, where they are gradually destroyed. The phenomenon of phthisis in man is strong evidence that the human being possesses a relatively high degree of resistance to the tubercle bacillus.

---

**Arsenic in "Chemically Pure" Zinc.**—MYERS (*Public Health Reports*, October 6, 1916, vol. xxxi, No. 40) examined eight samples of metallic zinc purporting to be chemically pure and free from arsenic and found them to contain arsenic. After specifications were submitted requiring arsenic-free zinc, samples of impure zinc were also received. Amounts varying from 1 to 10 parts per 1,000,000 of metallic arsenic were found. This fact shows that it is necessary for analysts in food, drug, and public health laboratories to examine all chemicals for themselves.

---

## PATHOLOGY AND BACTERIOLOGY

---

UNDER THE CHARGE OF

JOHN McCRAE, M.D., M.R.C.P.,

LECTURER ON PATHOLOGY AND CLINICAL MEDICINE, MC GILL UNIVERSITY, MONTREAL;  
SOME TIME PROFESSOR OF PATHOLOGY IN THE UNIVERSITY OF VERMONT,  
BURLINGTON, VERMONT; SENIOR ASSISTANT PHYSICIAN, ROYAL  
VICTORIA HOSPITAL, MONTREAL,

AND

OSKAR KLOTZ, M.D., C.M.,

PROFESSOR OF PATHOLOGY AND BACTERIOLOGY, UNIVERSITY OF PITTSBURGH,  
PITTSBURGH, PA.

---

**The Specificity of Streptococci.**—Much has appeared in recent literature indicating the importance of streptococci in human disease. Various authors have approached the subject from different angles. Some have been content with isolating these microorganisms from tissues and offering this evidence as demonstrating the causative factor in the disease, others have studied the streptococci from various sources hoping to find a means of classification which would indicate their biological and pathogenic qualities, a third group has attempted to distinguish the streptococci only by their ability to locate in particular regions and induce disease in them. HENRICI (*Jour. Infect. Dis.*, 1916, xix, 572) studied 53 strains of streptococci from various sources, comparing the cultural characters with the pathogenic qualities as exhibited in infection of rabbits. The streptococci used were classified according to the method of Andrewes and Horder using the hemolytic test to divide the two main groups. Two hundred and twenty-five rabbits were inoculated with varying amounts of culture and were autopsied at intervals of two to ten days. Careful observations were recorded and tissues were studied microscopically. The author found lesions in the brain, heart, arteries, muscles, joints, and kidneys. In no